

Remarks

Cancel claim 27 without prejudice or disclaimer. Amend claims 26, 41, 45, and 47. These amendments do not add new matter to the application and are fully supported by the original claims or the specification. Add new claims 58-61.

A marked up version of the claims showing the changes made is submitted with this Amendment and Response.

The pending claims are 26, 28-36 and 38-61.

Rejection based on 35 U.S.C. § 102(b)

The Examiner rejected claims 26-36 and 38-57 as anticipated by WO 93/10167 (hereinafter WO '167) under 35 U.S.C. § 102(b). Applicants submit that the pending claims are novel.

WO '167 discloses an article consisting of an epoxy base and a urethane top coat which is useful in marking applications. That is, the substrate disclosed in WO'167 is an epoxy base. In contrast, the independent claims of the present invention recite that the substrate is selected from polymeric material, wood, fabric, reinforced polymers, metal, reflective sheeting, and a combination thereof, wherein the polymeric material or the polymer of the reinforced polymer comprises a polyvinyl chloride, polyester, acrylic polymer, polycarbonate, polyurethane, polyethylene acrylic acid copolymer, or polyvinyl acetate. WO '167 provides no teaching or suggestion that the substrate is anything other than an epoxy base. There is no disclosure of a substrate made of wood, fabric, metal, reflective sheeting. There is no disclosure of a substrate that includes polymeric material comprising a polyvinyl chloride, polyester, acrylic polymer, polycarbonate, polyurethane, polyethylene acrylic acid copolymer, or polyvinyl acetate. Likewise, there is no disclosure of a reinforced polymer comprising a polyvinyl chloride, polyester, acrylic polymer, polycarbonate, polyurethane, polyethylene acrylic acid copolymer, or polyvinyl acetate.

WO '167 does not teach all the limitations of independent claims 26, 41, 45, and 47. Thus, these claims and the claims dependent therefrom are not anticipated by WO '167. Applicants respectfully request withdrawal of the rejection based on lack of novelty.

New dependent claims 59-62 provide that at least part of the substrate can be seen through the clear polyurethane topcoat protective layer. A substrate that

can be seen through the polyurethane layer is not disclosed in WO '167. Rather, this reference teaches the use of titanium oxide or other coloring pigment in the polyurethane layer. The epoxy base is not visible through the polyurethane layer.

Applicants submit that pending claims 26, 28-36 and 38-61 are in condition for allowance. A Notice of Allowance is earnestly solicited.

Respectfully submitted,

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Marked-up Version Showing the Changes Made to U.S. Serial No. 09/710,036

In the claims:

Cancel claim 27. Amend claims 26, 41, 45, and 47. Add new claims 58-61.

26. (Third amendment) An article comprising:

- a) a substrate selected from polymeric material, wood, fabric, reinforced polymers, metal, reflective sheeting, and a combination thereof, wherein the polymeric material or the polymer of the reinforced polymer comprises a polyvinyl chloride, polyester, acrylic polymer, polycarbonate, polyurethane, polyethylene acrylic acid copolymer, or polyvinyl acetate; and
- b) a clear polyurethane applied as a protective layer on a first surface of said substrate, said polyurethane is a reaction product of,
 - i) a first component comprising one or more polyols having an equivalent weight in the range from about 28 to about 3000, optionally one or more diols having an equivalent weight in the range from about 30 to about 4000, and a catalyst; and
 - ii) a second component comprising at least 50 weight percent of a primary polyisocyanate having a functionality of at least three, and wherein the first and second components together are solvent free.

41. (Third amendment) An article comprising:

- a) a substrate selected from polymeric material, wood, fabric, reinforced polymers, metal, reflective sheeting, and a combination thereof, wherein the polymeric material or the polymer of the reinforced polymer comprises a polyvinyl chloride, polyester, acrylic polymer, polycarbonate,

polyurethane, polyethylene acrylic acid copolymer, or polyvinyl acetate; and

- b) a clear protective polyurethane layer on a first surface of the substrate, wherein the polyurethane contains primary aliphatic isocyanate crosslinking, and wherein about 25% or more of the total crosslink density is contributed by a polyisocyanate components, said polyurethane exhibiting at least one property selected from the group consisting of a flexural modulus of 1.0×10^8 pascals or less, a storage modulus of 1.0×10^8 pascals or less, a Shore A hardness of less than 94, a Hoffman scratch-hardness test result of 2 or less, and a color shift, in accordance with heat aging test ASTM D2244-79, within 1 delta E.

45. (Second amendment) An article comprising:

- a) a substrate having a first surface, said substrate selected from polymeric material, wood, fabric, reinforced polymers, metal, reflective sheeting, and a combination thereof, wherein the polymeric material or the polymer of the reinforced polymer comprises a polyvinyl chloride, polyester, acrylic polymer, polycarbonate, polyurethane, polyethylene acrylic acid copolymer, or polyvinyl acetate;
- b) indicia on at least a portion of the first surface of the substrate; and
- c) a clear polyurethane applied as a protective layer over the indicia and any exposed portions of the first surface of said substrate, wherein the polyurethane is a reaction product of:
 - i) a first component comprising one or more polyols having an equivalent weight in the range from about 28 to about 3000, optionally one or more diols having an equivalent weight in the range from about 30 to about 4000, and a catalyst; and
 - ii) a second component comprising at least 50 weight percent of a primary polyisocyanate having a

functionality of at least three, and wherein the first and second components together are solvent free;

wherein the first and second components form a solvent-free admixture having an NCO:OH ratio of about 0.75 to about 1.25.

47. (Third amendment) An article comprising;

- a) a substrate selected from polymeric material, wood, fabric, reinforced polymers, metal, reflective sheeting, and a combination thereof, wherein the polymeric material or the polymer of the reinforced polymer comprises a polyvinyl chloride, polyester, acrylic polymer, polycarbonate, polyurethane, polyethylene acrylic acid copolymer, or polyvinyl acetate; and
- b) a flexible clear polyurethane applied as a layer on a surface of said substrate, said flexible polyurethane comprising a reaction product of,
 - i) a first component included one or more polyols having an equivalent weight in the range from about 28 to about 3000, optionally one or more diols having an equivalent weight in the range from about 30 to about 4000, and a catalyst; and
 - ii) a second component comprising a primary aliphatic isocyanate crosslinker having at least 50 weight percent polyisocyanate,

wherein the first and second components together are solvent free.